Solving Linear Equations /Inequalities

Practice Questions

MR. AHMED SAMAK

01550022244
01063579366

1 No Calc.

If $6x + 9 = 30$, what is the value of $2x + 3$?

A) 5

B) 10

C) 15

D) 20

2 No Calc.

If $\frac{x-1}{3} = k$ and $k = 3$, what is the value of x ?

A) 2

B) 4

C) 9

D) 10

3 Calc.

If $16 + 4x$ is 10 more than 14, what is the value of $8x$?

A) 2

B) 6

C) 16

D) 80

4 No Calc.

If $5x + 6 = 10$, what is the value of $10x + 3$?

A) 4

B) 9

C) 11

D) 20

5 Calc.

When 4 times the number x is added to 12, the result is 8. What number results when 2 times x is added to 7 ?

A) -1

B) 5

C) 8

D) 9

6 No Calc.

If $3r = 18$, what is the value of $6r + 3$?

A) 6

B) 27

C) 36

D) 39

7 No Calc.

If $\frac{5}{x} = \frac{15}{x+20}$, what is the value of $\frac{x}{5}$?

A) 10

B) 5

C) 2

D) $\frac{1}{2}$

8 No Calc.

If $\frac{7}{9}x - \frac{4}{9}x = \frac{1}{4} + \frac{5}{12}$, what is the value of x ?

9 No Calc.

If $\frac{3}{5}w = \frac{4}{3}$, what is the value of w ?

A) $\frac{9}{20}$

B) $\frac{4}{5}$

C) $\frac{5}{4}$

D) $\frac{20}{9}$

10 No Calc.

If $\frac{t+5}{t-5} = 10$, what is the value of t ?

A) $\frac{45}{11}$

B) 5

C) $\frac{11}{2}$

D) $\frac{55}{9}$

11 Calc.

If $3p - 2 \geq 1$, what is the least possible value of $3p + 2$?

A) 5

B) 3

C) 2

D) 1

12 Calc.

If $3(c + d) = 5$, what is the value of $c + d$?

A) $\frac{3}{5}$

B) $\frac{5}{3}$

C) 3

D) 5

13 No Calc.

If $x = \frac{2}{3}y$ and $y = 18$, what is the value of $2x - 3$?

A) 21

B) 15

C) 12

D) 10

14 No Calc.

$$\frac{2}{3}t = \frac{5}{2}$$

What value of t is the solution of the equation above?

15 Calc.

$$6x - 9y > 12$$

Which of the following inequalities is equivalent to the inequality above?

A) $x - y > 2$

B) $2x - 3y > 4$

C) $3x - 2y > 4$

D) $3y - 2x > 2$

16 Calc.

$$2(5x - 20) - (15 + 8x) = 7$$

What value of x satisfies the equation above?

17 No Calc.

$$21x + 14 = 7(3x + a)$$

In the equation above, a is a constant. For what value of a does the equation have an infinite number of solutions?

18 **No Calc.**

If $15bx - 20 > 35$, where b is a positive constant, which of the following best describes all possible values of $4 - 3bx$?

(A) Any value less than -7

(B) Any value greater than -7

(C) Any value less than $-\frac{11}{3b}$

(D) Any value greater than $\frac{11}{3b}$

19 **No Calc.**

If $-18 \geq 6 - 12ax$, which inequality represents the possible range of values of $1 - 2ax$?

(A) $1 - 2ax \geq -23$

(B) $1 - 2ax \leq -23$

(C) $1 - 2ax \leq -3$

(D) $1 - 2ax \geq -3$

20 **No Calc.**

$4c + 5 < 4c + 3$

Which of the following best describes the solutions to the inequality shown above?

A All real numbers

B $c < \frac{1}{2}$

C $c > \frac{1}{4}$

D No solution

21 **No Calc.**

If $9 \geq 4x + 1$, which inequality represents the possible range of values of $12x + 3$?

A $12x + 3 \geq 17$

B $12x + 3 \leq 17$

C $12x + 3 \geq 27$

D $12x + 3 \leq 27$

22 **No Calc.**

$$(24y - 8) + 7 = 29$$

Given the above equation, what is the value of $3y - 1$?

(A) $\frac{5}{4}$

(B) $\frac{11}{8}$

(C) $\frac{11}{4}$

(D) $\frac{29}{8}$

23 **No Calc.**

$$3ab - 1 = 2ab - 3$$

Given the equation above, what is the value of ab?

(A) -4

(B) -3

(C) -2

(D) -1

24 No Calc.

$$0.48 = 0.2x - 0.72$$

Given the equation above, what is the value of $100\,(0.2x - 0.48)$?

25 No Calc.

$$\frac{2}{7}x + \frac{11}{7}x = \frac{3}{5}$$

Given the equation above, what is the value of $13x$?

26 No Calc.

$$75 = 24x$$

Given the equation above, what is the value of $\frac{x}{25}$?

27 No Calc.

$$\frac{1}{5} + 4h = \frac{1}{3}$$

What is the value of h in the equation above?

28 Calc.

$$4r - 5 = -\frac{1}{2} - 4(r + 1)$$

Which of the following best describes the solution set to the equation shown above?

(A) The equation has no solutions.

(B) The equation has exactly one solution, $r = \frac{1}{16}$.

(C) The equation has exactly one solution, $r = \frac{1}{4}$.

(D) The equation has infinitely many solutions.

29 Calc.

$$6 - ax = 5x + 12$$

In the equation shown above, a is a constant. Which of the following values of a results in an equation with exactly one solution?

(A) 4

(B) 5

(C) Neither value

(D) Both values

30 Calc.

$$-2 > \frac{3(b+4)}{-2}$$

Which of the following best describes the solutions to the inequality shown above?

(A) $b < -3$

(B) $b < -\frac{16}{3}$

(C) $b > -\frac{8}{3}$

(D) $b > 0$

31 **No Calc.**

$$|x-4|-x>3$$

Which of the following best describes the solutions to the inequality shown above?

A $x<\frac{1}{2}$

B $\frac{1}{2}<x<\frac{7}{2}$

C $x<\frac{1}{2}$ or $x>7$

D No solution

32 **No Calc.**

$$4|6+2s|-27\leq -3$$

Which of the following best describes the solutions to the inequality shown above?

A $-24\leq s\leq 0$

B $-6\leq s\leq 0$

C $s\leq 0$ or $s\geq 3$

D No solution

33 **Calc.**

$$4x + 1 = -ax - 4$$

In the equation shown above, a is a constant. Which of the following values of a results in an equation with exactly one solution?

A 4

B -4

C Neither value

D Both values

Sheet 1 : Solving Liner Equations / Inequalities							
1	B	11	A	21	D	31	A
2	D	12	B	22	C	32	B
3	C	13	A	23	C	33	A
4	C	14	15/4	24	72		
5	B	15	B	25	21/5		
6	D	16	31	26	1/8		
7	C	17	2	27	1/30		
8	2	18	A	28	B		
9	D	19	C	29	D		
10	D	20	D	30	C		